

A New Species of the Genus *Batrachedra* from Japan (Lepidoptera, Coleophoridae s. l.)

By

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杉島一広¹⁾: *Batrachedra* 属の日本からの 1 新種 (鱗翅目, 広義ツツミノガ科)

The genus *Batrachedra* is composed of somber-colored and rather narrow-winged gelechioid moths, with the forewing radial vein four-branched. Detailed diagnoses are available in publications: e.g. Hodges (1966), Koster and Sinev (2003), and Sugisima (2005). The genus comprises approximately 130 species and is distributed mainly in tropic and sub-tropic regions. Larval feeding habit is variable. Most species are associated with reproductive organs of plants, particularly with flowers or fruits of palms (Arecaceae). Some species are predator on scale insects or aphids. Five species including an unidentified one have been recorded in Japan (Sugisima, 2005), and nine species are known in the Russian Far East (Sinev, 1999).

When examining gelechioid samples collected in the course of faunal investigations of the Imperial Palace, Tokyo, conducted by the National Science Museum, Tokyo, I found one male and two female specimens of a *Batrachedra* species. Many additional conspecific specimens were found in several institute and personal collections of Japanese micromoths. In coloration and genitalia, the Japanese form was quite similar to *B. parvulipunctella* Chrétien distributed in western Palaearctic. Several genital characters were, however, constantly different between the Japanese form and *B. parvulipunctella*. I concluded that the Japanese specimens represent an unnamed species, and I describe it as new in the present paper. With regard to the family placement of the genus *Batrachedra*, I follow Kaila (2004) and assign it to the Coleophoridae s. l.

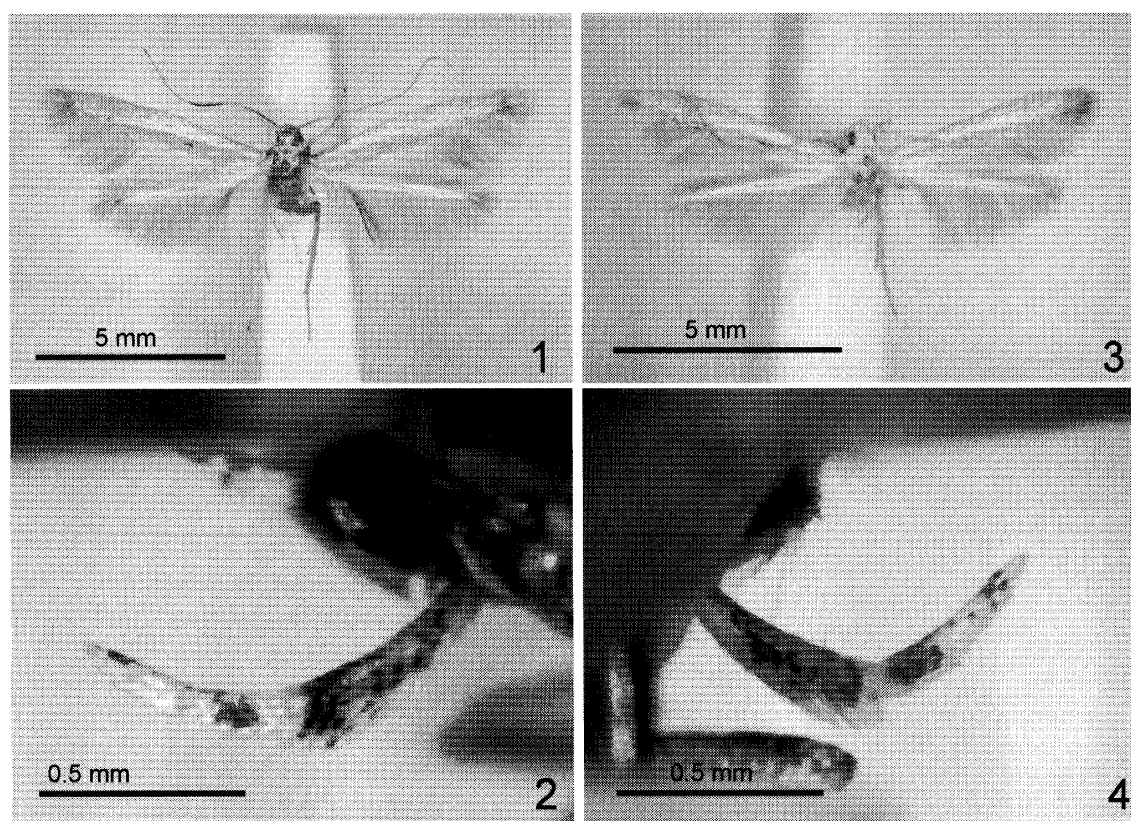
The specimens used in this paper are deposited in National Science Museum, Shinjuku, Tokyo, (NSMT) and Entomological Laboratory, Osaka Prefecture University, Sakai (OPU).

***Batrachedra flavilineata* Sugisima, sp. nov.**

(Figs. 1–9)

Type series. Holotype: ♀, labelled “東京都皇居上道灌濠, Japan, Tokyo, Imperial Palace, Kami-Dokanbori, 7. X. 1999, Y. Arita & M. Ikeda”, “♀ genitalia slide no. 1898, K. Sugisima, 2005”, deposited in NSMT. Paratypes: Honshû: 1♂, same locality as holotype, 31. VIII. 2000, Y. Arita & M. Ikeda (NSMT); 1♀, same locality as holotype, 14. IX. 2001, Y. Arita, M. Ikeda & U. Jinbo (NSMT); 1♀, Ishida, Hino City, Tokyo, 15. VIII. 1993, U. Jinbo (OPU); 1♀, Ishida, Hino City, Tokyo, 21. V. 1995, U. Jinbo (NSMT); 2♀, Siroyama-kôen, Yahiko Vill., Niigata Pref., 8. VIII. 2000, K. Sugisima leg. (OPU); 1♀,

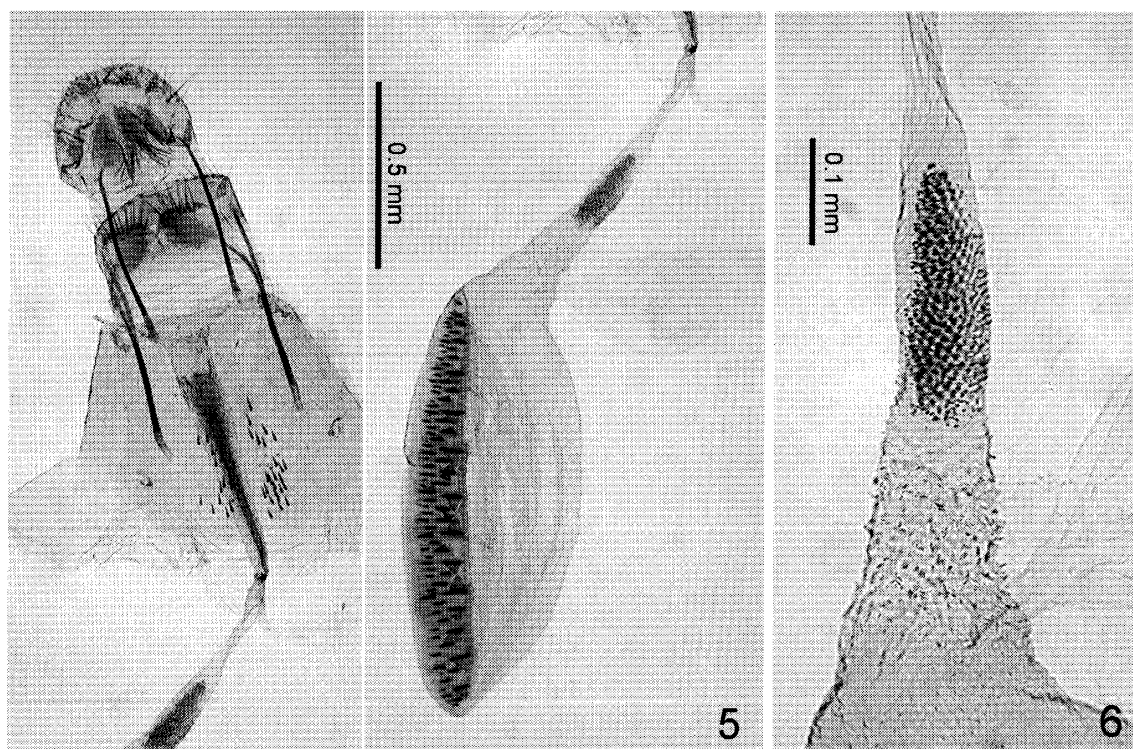
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Figs. 1–4. Moths of *Batrachedra flavilineata* sp. nov. 1, Holotype, labial palpus, magnified in Fig. 2; 3, paratype, male, same locality as holotype, labial palpus magnified in Fig. 4.

Kotakigawa, Itoigawa City, Niigata Pref., 17. VIII. 1996, N. Hirano leg. (OPU); 1♂, Asama-onsen, Matumoto City, Nagano Pref., 6. VIII. 2000, K. Sugisima leg. (NSMT); 1♂, Kinomi, Kamiyahagi Town, Gifu Pref., 4. VII. 2000, K. Sugisima leg. (OPU); 2♀, Zyôga-mine, Hosoe Town, Hamamatsu City, Sizuoka Pref., 4. VIII. 2000; K. Sugisima leg. (OPU); 1♂, Miwa Town, Aichi Pref., 3. VIII. 1989, T. Mano leg. (OPU); 1♂, locality and collector same as preceding specimen, 4. IX. 1989 (NSMT); 1♀, Nabeta-kantaku, Yatomi Town, Aichi Pref., 8. VIII. 1986, T. Mano leg. (OPU); 1♂, Yakusa, Toyota City, Aichi Pref., 13. VI. 1990, T. Mano leg. (OPU); 1♂, Kamiaiba, Fujiwara Town, Mie Pref., 22. VIII. 1987, T. Mano leg. (OPU); 1♀, locality and collector same as preceding specimen, 14. IX. 1987 (OPU); 1♂, 1♀, Ôyachi, Yokkaichi City, Mie Pref., 17. V. 1988, T. Mano leg. (OPU); 1♀, Oosawa-pond, Uebayashi, Ueno City, Mie Pref., 24. VIII. 1998, T. Mano leg. (OPU); Kyûshû: 1♂, Nangô Town, Miyazaki Pref., 17. IV. 1995, K. Sugisima leg. (OPU); 1♀, Mt. Shibisan, Miyakonojo Town, Kagoshima Pref., 29–30. VII. 1995, T. Ueda leg. (OPU).

Diagnosis. Head and thorax unicolorously pale ochreous. Forewing dull yellowish, dusted with greyish scales except for area along longitudinal axis of wing. ♀ genitalia: ductus bursae gradually tapering from ostium to middle, where the ductus seminalis branches off, thence gradually widening towards corpus bursae, without any coiling; coarse-spined area of ductus bursae occupying 1/6–1/5 of whole ductus bursae; corpus bursae ellipsoidal, with signum of a sclerotized plate, which is nearly as long as corpus bursae. ♂ genitalia: valva moderately acute and slightly up-curved in apex; phallus nearly twice as long as valva.



Figs. 5–6. ♀ genitalia of *Batrachedra flavilineata* sp. nov. 5, Whole genitalia; 6 magnified view of spined area of ductus bursae.

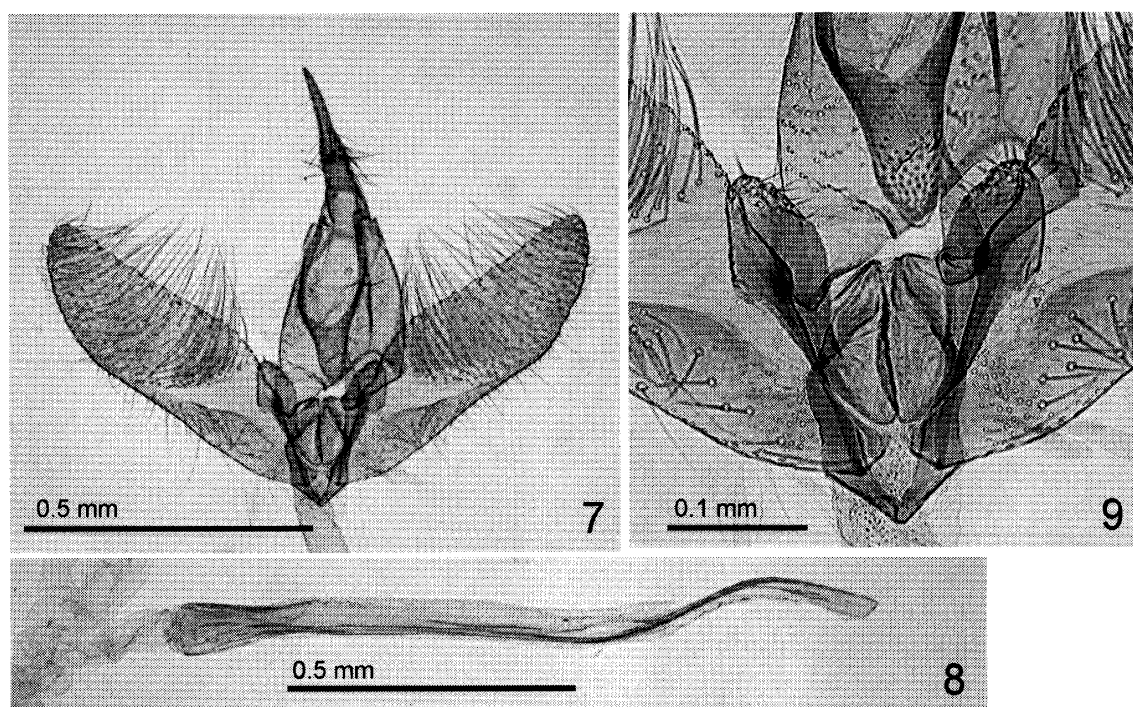
Description. Forewing length: ♂ 4.4–5.4 mm; ♀ 4.0–6.4 mm (holotype 5.9 mm). Head and thorax pale ochreous, without any darker-colored areas. Labial palpus (Figs. 2, 4) pale ochreous; outer surface with dark brownish patches near apex of second segment, near base of the third segment, and near apex of the third segment. Forewing (Figs. 1, 3) dull yellowish, dusted with greyish scales except for area along longitudinal axis of wing; non-dusted area giving the impression as if the wing has a yellowish longitudinal streak; small black dots around 1/3 on fold and around apex of cell, often absent.

Female genitalia (Figs. 5–6). Ductus bursae not coiled, gradually widening towards both ends from middle, where a small sclerite is present, and where the ductus seminalis branches off; caudal half of ductus bursae slightly sclerotized and lined with minute and dense spines except for simply membranous area near rather wide ostium; cephalic half membranous, with a coarse-spined area occupying 1/6–1/5 length of whole ductus bursae. Accessory pouch branching off around the border of ductus bursae and corpus bursae. Corpus bursae ellipsoidal, nearly twice as long as wide, with signum of a characteristically elongate sclerotized plate, which is nearly as long as corpus bursae and has thin triangular teeth; teeth incompletely arranged in two rows, one composed of smaller teeth and another composed of larger teeth.

Male genitalia (Figs. 7–9). Gnathos apically moderately acute. Valva moderately acute and slightly up-curved in apical part. Anellus lobe robust. Phallus well longer than 1.5 length of valva, nearly twice as long as it, moderately bent near apex.

Distribution. Japan: Honshû, Kyûshû.

Biology. Label data suggest that *Batrachedra flavilineata* has more than one generation a year. Immature stages are unknown, while the larva of supposed close relative, *Batrachedra parvulipunctella* Chrétien, is reported to prey on scale insects, which occur on *Phragmites* and *Arundo*, Poaceae (Koster &



Figs. 7–9. ♂ genitalia of *Batrachedra flavilineata* sp. nov. 7, Whole genitalia except for phallus, caudal view, valva expanded; 8, phallus; 9, magnified view of juxta and anellus lobe.

Sinev, 2003).

Remarks. Both in coloration and genitalia, *Batrachedra flavilineata* sp. nov. is most similar to *B. parvulipunctella*. The non-dusted area of the forewing looks a single yellowish longitudinal streak in *B. flavilineata*, while it tends to be divided into two streaks in *B. parvulipunctella*. In the female genitalia, the coarse-spined area of the ductus bursae occupies at most 1/5 of the whole ductus bursae in *B. flavilineata*, but the corresponding area occupies roughly 1/3 of the whole ductus bursae in *B. parvulipunctella*. In the male genitalia, the phallus is almost twice as long as the valva in *B. flavilineata*, whereas it is at most 1.5 length of valva in *B. parvulipunctella*.

Acknowledgements

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要 約

国立科学博物館による皇居動物相調査の過程で得られたキバガ上科標本を検討したところ、*Batrachedra* 属の未記載種 1♂ 2♀ が見出されたので、新種記載を行った。なお、記載は他の地域から得られていた多数の同種標本にも基づいている。

Batrachedra flavilineata Sugisima, sp. nov. キスジホソキバガ

前翅長 ♂ 4.4–5.4 mm, ♀ 4.0–6.4 mm. 頭部と胸部は淡黄褐色で、暗褐色部を持たない。前翅は黄色で、翅の長軸に沿った領域を除いて灰色の鱗片が混ざる；そのせいで、翅には長軸沿いに黄色い縞が走っているように見える。♀交尾器：ductus bursae は中央部でもっとも細く、両端に向けて徐々に太

くなる; *ductus bursae* の後方半分は僅かに硬化し, 細かい棘に裏打ちされる; *ductus bursae* の前方半分は膜質で, 粗大な棘群に裏打ちされた部分の長さは *ductus bursae* 全長の $1/6-1/5$; *corpus bursae* は楕円体で, 長さは幅の 2 倍近い; *signum* は極端に細長い硬化板で, そこには薄い三角形の歯群が大型歯の列と小型歯の列に不明瞭に分かれて並ぶ. ♂交尾器: *phallus* の長さは *valva* の長さの 2 倍近い. 本州と九州に分布. 年に複数世代のようである. 幼生期は不明. 近似種 *Batrachedra parvulipunctella* Chrétie からは, ♀ならば *ductus bursae* 全長に占める粗大な棘群領域の割合が小さいことによって, ♂ならば *valva* に対する *phallus* の相対長が長いことによって, それぞれ識別される.

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